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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/849,023	05/04/2001	Timothy F. Cox	12755A008600	8460

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EXAMINER	
WILSON, ROBERT W	

ART UNIT	PAPER NUMBER
2661	

DATE MAILED: 09/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/849,023	COX ET AL.	
	Examiner	Art Unit	
	Robert W Wilson	2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 5/4/01 is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.0 The application of Cox et. al. entitled POWER POOLING IN NETWORK DOWNSTREAM DATA TRANSMISSION which was filed on 5/4/01 without foreign priority was examined. Claims 1-24 are pending.

Claim Rejections - 35 USC § 103

2.0 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.0 **Claims 1-4, 6-10, 12-14, 16-18, & 23-24** are rejected under 35 U.S.C. 103(a) as being unpatentable over Denkert et. al. (U.S. Patent No.: 6,374,117 B1).

Referring to **Claim 1**, Denkert teaches: A method of simultaneously transmitting data packets to multiple users using limited transmission power (Figure 3 & 4 shows a method of transmitting data packets based upon measurement data which can be utilized in both uplink and downlink per col. 7 lines 60-67. The apparatus of Figs 3 & 4 can be utilized the BASE STATION 610 per Fig 6 to transmit to multiple users in MOBILEs 620 per Fig 6. The transmission power defined for the packets is based upon QoS per Fig 5)

a) establishing transmission power requirements for each user (The apparatus shown in Figs 3 & 4 measures the power on a link between a BASE and a MOBILE per Fig 6 and determines the power level based upon QoS per Fig 5)

b) receiving in a queue a plurality of data packets for transmission to one or more users (Figure 3 & 4 show a Delay queue of data packets)

c) selecting one or more data packets for transmission in a composite burst with a cumulative power for the selected packets not exceeding the limited transmission power (Figure 4 shows the selection of a NUMBER OF PACKETS in which a power level is determined for transmission on a CDMA, FDMA, TDD or burst per col. 7 lines 58-60)

d) transmitting the selected data packets in a composite burst with limited transmission power (POWER CONTROL 300 transmits a NUMBER OF PACKETS or selected data packets for

transmission on CDMA, FDMA, TDD or composite burst per col. 7 lines 58-60 which is limited by the POWER CONTROL 300 per Fig 4)

e) repeating step c) until all data packets in queue have been transmitted (All of the packets for a given associated with a given priority are sent and then all of the packets for a different priority are sent per Figs 3-5)

Denkert does not expressly call for: repeating until all packets in a queue has been transmitted but teaches transmitting all packets of the same priority at a given power level and then going on and transmitting the next group of packets of a given priority level per Figs 3-5.

It would have been obvious to one of ordinary skill in the art at the time of the invention that transmitting all packets of the same priority at a given power level and then going on and transmitting the next group of packets of a given priority level performs the same function as repeating until all packets in a queue have been transmitted.

In Addition Denkert teaches:

Regarding **Claim 2**, wherein step a) includes determining a signal to noise ratio in the transmission link to each user whereby requisite power can be determined for a desired level of data reception (measurement of C/I per col. 2 lines 24-67 or signal strength per col. 4 lines 43-67 so that power a power level can be defined per Fig 5)

Regarding **Claim 3**, wherein step a) includes identifying data packets which have been delayed in transmission , and giving priority in selection to delayed data packets (Dqueue or identifying delayed packets and provide priority based upon Fig 5)

Regarding **Claim 4**, wherein step c) further includes assigning a priority weight to users based on quality of service subscribed by them (The reference teaches making a decision based upon QoS PARAMETERS per fig 5 which can be parameters based upon a plurality of Classes per col. 5 lines 59-60. The examiner takes official notice that it is well known in the art to have utilize weighting when prioritizing plurality of classes of data based upon QoS per col. 2 lines 55-67 or Figure 1 per U.S. Patent No.; 6,317,416 B1. It would have been obvious to one of ordinary skill in the art at the time of the invention to assign priority weights to users based upon QoS because they are different Classes of traffic)

Regarding **Claim 6**, wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission (The reference teaches different protocols such as CDMA, FDMA ,TDD etc per col. 7 line 58. It would have been obvious to one of ordinary skill in the art at the time of the invention that each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission because it is a different protocol.)

Regarding **Claim 7**, wherein each packet is assigned to a different carrier frequency for simultaneous multiple access transmission (The reference teaches different protocols such as CDMA, FDMA ,TDD etc per col. 7 line 58. It would have been obvious to one of ordinary skill in the art at the time of the invention that each packet is assigned to a different carrier frequency for simultaneous multiple access transmission because it is a different protocol.)

Regarding **Claim 8**, wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission (The reference teaches different protocols such as CDMA, FDMA ,TDD etc per col. 7 line 58. It would have been obvious to one of ordinary skill in the art at the time of the invention that each packet is assigned to a different carrier frequency for simultaneous multiple access transmission because it is a different protocol

Regarding **Claim 9**, wherein step c) includes identifying data packets which have been delayed in transmission and giving priority in selection to delayed data packets (Fig 4)

Regarding **Claim 10**, wherein step c) further includes assigning priority weight to users based on quality of service subscribed by the user (The reference teaches making a decision based upon QoS PARAMETERS per Fig 5 which can be parameters based upon a plurality of Classes per col. 5 lines 59-60. The examiner takes official notice that it is well known in the art to have utilize weighting when prioritizing plurality of classes of data based upon QoS per col. 2 lines 55-67 or Figure 1 per U.S. Patent No.; 6,317,416 B1. It would have been obvious to one of ordinary skill in the art at the time of the invention to assign priority weights to users based upon QoS because they are different Classes of traffic)

Regarding **Claim 12**, wherein each weight is assigned to a different carrier frequency for simultaneous multiple access transmission (The reference teaches different protocols such as CDMA, FDMA ,TDD etc per col. 7 line 58. It would have been obvious to one of ordinary skill in the art at the time of the invention that each packet is assigned to a different carrier frequency for simultaneous multiple access transmission because it is a different protocol)

Regarding **Claim 13**, wherein step c) includes identifying data packets which have been delayed in transmission and giving priority and selection to delayed data packets (Fig 4)

Regarding **Claim 14**, wherein step c) further includes a priority weight to users based on quality of service subscribed by the user (The reference teaches making a decision based upon QoS PARAMETERS per Fig 5 which can be parameters based upon a plurality of Classes per col. 5 lines 59-60. The examiner takes official notice that it is well known in the art to have utilize weighting when prioritizing plurality of classes of data based upon QoS per col. 2 lines 55-67 or Figure 1 per U.S. Patent No.; 6,317,416 B1. It would have been obvious to one of ordinary skill in the art at the time of the invention to assign priority weights to users based upon QoS because they are different Classes of traffic)

Referring to **Claim 15**, Denkert teaches: Apparatus for selecting data packets for simultaneously transmission to multiple users using a limited transmission power (Figure 3 & 4 shows a apparatus of transmitting data packets based upon measurement data which can be utilized in both uplink and downlink per col. 7 lines 60-67. The apparatus of Figs 3 & 4 can be utilized in the BASE STATION 610 per Fig 6 to transmit to multiple users in MOBILEs 620 per Fig 6. The transmission power defined for the packets is based upon QoS per Fig 5)

a) memory for receiving a queue of plurality of data packets for transmission to one or more users (a CONTROL AND PROCESSING UNIT 630 per Fig 6 and Figure 4 shows a Delay Queue for receiving a plurality of data packets)

b) power determining means for establishing power requirements for transmitting data to each user based on signal to noise ratio in each link to each user (The POWER CONTROL 300 per Figs 3 & 4 or means)

c) data packet selecting means for selecting one or more data packets for transmission in a composite burst with cumulative power for the selected packets not exceeding the limited transmission power, the selecting means delaying packets as necessary to accommodate the limited transmission power (Figures 3 & 4 show the means for selecting one or more data packets for transmission at a given power level based upon QoS Delay priority or delaying means)

Denkert does not expressly call for: memory for receiving in a queue but teaches a CONTROL AND PROCESSING UNIT 630 per Fig 6 and Delay Queue per Figs 3 & 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention that the BASE STATION per 610 per Figure 6 has memory which stores packets in order for the invention to work.

In Addition Denkert teaches:

Regarding **Claim 17**, wherein the selection means gives priority in selection to delayed data packets (Fig 5)

Regarding **Claim 18**, wherein the selection means give priority in selection to users based on quality of service (The reference teaches making a decision based upon QoS PARAMETERS per fig 5 which can be parameters based upon a plurality of Classes per col. 5 lines 59-60. The examiner takes official notice that it is well known in the art to have utilize weighting when prioritizing plurality of classes of data based upon QoS per col. 2 lines 55-67 or Figure 1 per U.S. Patent No.; 6,317,416 B1. It would have been obvious to one of ordinary skill in the art at the time of the invention to assign priority weights to users based upon QoS because they are different Classes of traffic)

Regarding **Claim 23**, wherein each packet is directly spread by a separate orthogonal code sequence for simultaneous multiple access transmission (The reference teaches different protocols such as CDMA, FDMA ,TDD etc per col. 7 line 58. It would have been obvious to one of ordinary skill in the art at the time of the invention that each packet is assigned to a different carrier frequency for simultaneous multiple access transmission because it is a different protocol

Regarding **Claim 24**, wherein each weight is assigned to a different carrier frequency for simultaneous multiple access transmission (The reference teaches different protocols such as CDMA, FDMA ,TDD etc per col. 7 line 58. It would have been obvious to one of ordinary skill in the art at the time of the invention that each packet is assigned to a different carrier frequency for simultaneous multiple access transmission because it is a different protocol)

Claim Rejections - 35 USC § 112

4.0 The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5.0 **Claims 5, 11, 15, 19, & 20-22** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Referring to Claims 5, 11, 15, 19, & 20, Where in the specification is "explicit priority assigned".

Claim Rejections - 35 USC § 112

6.0 The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6.0 **Claims 5, 11, 15, 19, & 20-22** are rejected under 35 U.S.C. 112/2nd paragraph because the metes and bounds of the claims cannot be assessed.

Referring to **Claims 5, 11, 15, 19, & 20**, What is meant by "explicit priority assigned".

Drawings

7.0 The drawings are objected by the examiner because the line quality in the drawings is unsatisfactory. The examiner recommends that the applicant submit a final formal set of drawings with the correction as stated above.

Conclusion

8.0 Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W Wilson whose telephone number is (703) 305-4703. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas Olms can be reached on (703) 305-4703. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Robert W. Wilson

Robert W Wilson
Examiner
Art Unit 2661

RWW
September 3, 2004